

### Abstract

Batch event historian methods and associated structure for gathering, storing and presenting data regarding a batch process where relationships among the various elements of data are automatically derived by an executive program. A persistent store includes structure corresponding to the relationships defined among procedural elements and equipment in accordance with batch processing industry S88.01 standards. The executive program gathers event information generated by the batch process and derives the relationships among the events in accordance with these industry standard models. Storage and corresponding retrieval and presentation of such historical data is thereby simplified for a user because the user need not manually configure the historian programs to derive the relationships. Association of any continuous data log with event information is automated by the present invention obviating the need for manual configuration by a user to establish such associations. Graphical user interface aspects of the present invention present the information as timeline Gantt charts to permit a user to easily switch between views of data and the procedural hierarchy associated with the data. The hierarchical relationship among several procedural elements may be viewed by simple clicking on the higher level elements. Drilling down on higher-level elements reveals lower level stored data associated with the higher level elements. Graphical interface techniques also permit viewing of data as associated with equipment related to the operation of particular procedural elements. Other graphical techniques permit two batch processes to be visually compared to rapidly identify differences therebetween. Further graphical features permit the scrolling of real time event information and continuous data as the batch is being processed.